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Institutional Credit Scheme for Coastal Fisheries Promotion in Japan

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Abstract

Japan has often emphasized co-management framework as an important factor of coastal fisheries management. The other essential factor of the management is the government financial support system. The government of Japan has constructed a rural coastal financial scheme for rural coastal development since 1948 when the Fisheries Cooperative Associations (FCAs) were allowed to raise public funds from their community members to implement a credit system for the benefit of fishermen. The rural coastal financial system in Japan has grown and established itself institutionally. Now there are two financial schemes for coastal fisheries promotion namely, credit and insurance schemes. The discussion focuses on the coastal fisheries credit scheme. The international perspective of subsidies in fisheries are also discussed.

Introduction

Rural development has constraints on technology, economics and supporting institution (Zeller 1997). In particular, rural development is very difficult to be accessed by general financial institutions that rely on financial market liberalization (Desai and Mellor 1993). The importance of rural finance policy in developing countries is to affect output and employment. This is supported by the discussion of the existence of the relationship between rural finance and growth to demonstrate the necessity of a financial policy to facilitate rural growth (McKinnon 1973, 1988; Shaw 1973; Desai and Mellor 1993).

Rural coastal finance in Japan is integrated in a fisheries cooperative framework. The Fisheries Cooperative Association (FCA) was developed to take a role on coastal fisheries resources management by using a co-management approach (see Lim et al 1995; Short 1992; Sato 1992, Matsuda 2002). As a cooperative organization in a co-management framework, FCA has been strongly facilitated by government's institutional and financial policies. Sato (1996) proposed that FCA's success story was caused by the reallocation of government's authority on exclusive fishing rights. Fishing rights acted as a magnet for fishermen to participate actively in the FCA's activities. Psychological contract of fishermen to the FCA is sharpened by the existence of fishing rights. A fisherman unless a member of FCA cannot engage in any commercial fishing in coastal waters.

On the other hand, FCAs also engage in strong economic activities supported by a government financial scheme. Short (1992) reminded that the important factor for successful coastal fisheries management is government's financial assistance. Besides subsidies in the form of construction of fisheries facilities, the government has also established a financial scheme for credit and an insurance system for coastal fisheries promotion. Those credit and insurance schemes are managed under the FCA framework. There have been a lot of discussions on the administrative function of co-management in the FCA framework. Thus, this paper focuses on economic functions of the FCA credit scheme.

Discussion

Fisheries in national economies in Japan

Japanese fish consumption is still one of the highest in the world. With 80 kg per capita, the Japanese consume about five times more fish than the average world consumption. The fish-eating culture has driven a huge fishery industry. The golden age of the industry was reached during the decades 1950-1970. During those decades

Japanese fishing fleets cruised Pacific Ocean and most of the ocean waters in the world. Exploration of high seas was probably prompted by the absence of rules of high seas fisheries at that time. Numbers of Japanese large-scale fleets were reduced by the oil price shocks that began in 1973 and by the development of the Exclusive Economic Zone (EEZ) regime beginning in 1977 (Sato 1992).

Supported by high growth of the secondary sectors of manufacturing industries and the tertiary sectors of services and international trading, Japan's economic development has been growing rapidly since the 1960s. On the contrary, the primary sectors such as agriculture and fisheries industries grew slowly in the 1970s and tended to level off. In term of food self-sufficiency, the roles of these sectors have been weakened significantly. This situation has resulted in a poor impression of the fishing industry today. The fisheries sector is strongly identified with three minor words of 3K's in Japanese, *Kitsui*, *Kitanai*, *Kiken* or hard, dirty and dangerous (Matsuda 1999). From the view of fishermen succession, fisheries is facing difficulties to attract youngsters to involve in fishing activities. Therefore, the government keeps providing incentives such as soft loans for fishing activities, and broadening the purpose of fisheries development not only to maintain production but also to reach security, recreational and environmental purposes (Matsuda 2002).

The rate of food self-sufficiency is believed to be at a critical level in Japan. The government promotes the policies to support production of principal foods, including fisheries production, not to drop to less than 45% of self-sufficiency. Rice production is still able to achieve 100% self-sufficiency, if we disregard the 5% of imports due to the consequences of the WTO's international trade rule. Meanwhile other foods originating from agriculture products have decreased in the share of domestic supply. In 2001, that self-sufficiency rate of various food products were 11% of wheat, 8% barley, 7% grains, 84% tubers, 82% vegetables, 44% fruits, 54% meats including chicken and whale, 96% eggs and 49% fish and shellfish (MAFF 2003).

The government provides a special credit scheme for fishermen and farmers in support of food sufficiency policies, even though the amount of credit for those has already been exceeded (Yamamoto 1992). Nevertheless, the government continues directing the credit policy program to vitalize rural sector activities.

Coastal fisheries management

In Japan, the small-scale fisheries operating in coastal waters are termed coastal household fisheries. They use non-powered, outboard powered or inboard powered boats of less than 10 gross tons (GT). Generally, the small-scale fisheries exploit sedentary, shallow water coastal resources such as shrimp, crabs, abalone, top shell, clams, seaweeds, etc. (Yamamoto 1992). By vessel size, fishing operation in

1960 was 95% dominated by small-scale fisheries consisting of 42,085 non-powered vessels and 116,993 less than 10 GT powered vessels from the total of 168,065 vessels. By 2000, the total number of vessels had reduced dramatically to 111,598 and the proportion of small-scale fisheries category was 93%, consisting of 133 non-powered and 104,045 less than 10 GT powered vessels (MAFF 2001).

In Japan the dual structure of the fishing industries is recognized. Coastal fisheries are distinguished from large-scale not only by size, but also by production orientation and even culture. The coastal fisheries are not fully market oriented businesses, but also form part of the fishermen's way of life and fishing communities' cultures. The government operates different policies for these two entities of the fisheries industries. Large-scale fisheries are positioned as a commercial business. Meanwhile small-scale fisheries are protected and their existence is sustained by a strong financial assistance system for credit and insurance schemes since the collapse of coastal fisheries would affect fishing communities. The government assumes that the small-scale fisheries sector will maintain food security by continuing to supply fish because they will fish even in unprofitable conditions when the large-scale fisheries relocate their capital to other more profitable businesses.

Numerous government-sponsored development programs have played a major role in improving the productive capabilities and income of small-scale local fisheries as one of the top priorities in the overall development of the fishing industry. The government provides interest-subsidized loans to fishermen, construct fishing ports, and other facilities such as public works, and sponsors programs for artificial reefs and other fishing ground improvement methods.

Rural finance system for coastal fisheries development

At a time of post-war financial difficulties, small and medium-scale fishermen who had poor loan security and financial credibility faced big problems in achieving the loans required to meet their financial needs. Also, the financial institutions were suffering from shortage of deposits which acted as a source of lending money (Katsuma 1996).

Loans for fisheries pose many difficulties for private finance due to fluctuations in production and prices of products caused by natural conditions, inherent low profitability, limited credit reliability, the long period of gestation required, and low levels of return on the investment. Therefore, government-program loans are extended to this sector to meet government policy objectives of food security and rural development. The financing systems are considered to be very important tools in carrying out government policies.

To strengthen the small and medium-scale of fisheries activities, the government enacted *Suisangyo Kyodo Kumiai Hou* (Fisheries Cooperative Association

Law, or FCA Law) in 1948 which gave approval for FCA to carry out business credit. Moreover, at the national level, the government built up and strengthened the financial schemes for coastal rural development, and in prefecture level *Shinyo Gyoren* (Prefecture Credit Federation of FCAs, or PCFFCAs) were also established. Together with the Central Cooperative Bank for Agriculture, Forestry and Fisheries (Norinchukin Bank), three-tier financial institutions were established exclusively for fisheries. This scheme is the first financial scheme for coastal fisheries promotion. The main source fund of the first scheme is generated from fishermen themselves through savings and deposit funds from FCA's members. FCAs, PCFFCs, and Nourinchukin Bank play an important role in this scheme. Figure 1 summaries the coastal rural financial system in Japan. To strengthen the rural finance system the Agricultural, Forestry and Fisheries Finance Corporation (AFC) was established in 1953 under the Agricultural, Forestry and Fisheries Loan Law.

Considering the budget expenditures relent on public funds, the government extended investment and loans to various public institutions for rural financial purposes. The investment program for funds collected is formulated as the Fiscal Investment and Loan Program (FILP). The FILP is often called the second national budget due to its function promoting public policies along side the national budget. FILP distributes its funds into various fields for the purpose of developing public welfare, including coastal rural and fisheries sector. Figure 2 shows the Fiscal and Investment and Loan Program. This is the second financial scheme for coastal fisheries promotion. The main source of funds is raised through postal savings, the national pension scheme, and postal life insurance. The AFC is the main agency that is engaged with (AFC 2000). AFC extends financing to individuals and enterprises engaged in fisheries (also

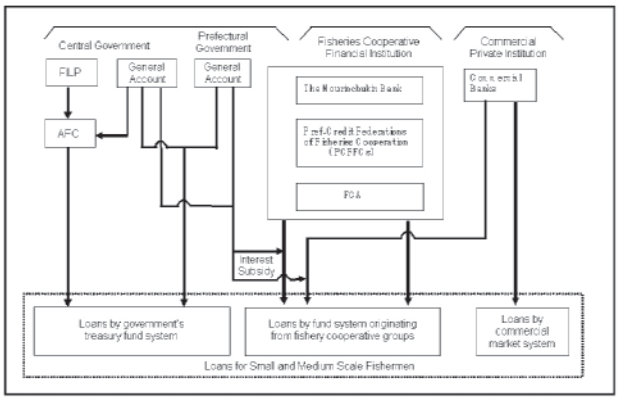

Fig. 1. Rural finance system in Japan for Coastal Fisheries

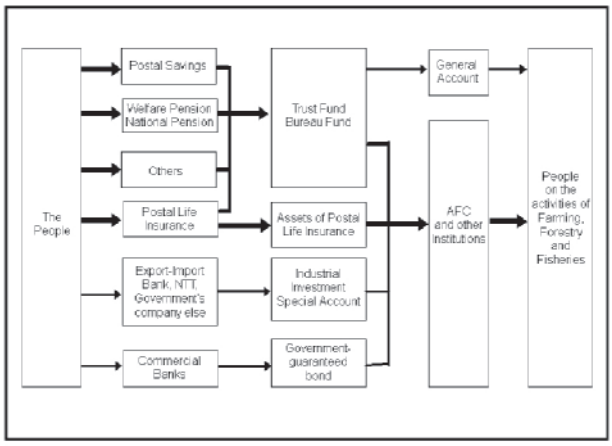

Fig. 2. Basic structure of the Fiscal Investment and Loan Program (FILP)

Source: Agriculture, Forestry and Fisheries Finance Corporation 2000
Note: Bold arrows indicate cash flow related to Agriculture, Forestry and Fisheries Finance Corporation

agriculture and forestry) and the food industry in accordance with the government's policies related to fisheries, agriculture, forestry and food supply.

Seidoshikin (*Official loan*)

The literal meaning of *Seidoshikin* is, "an official loan" under the second scheme in the previous section. *Seidoshikin* is an institutional financial instrument of the government's treasury funds system; it fundamentally means low interest rate loans lent by government financial institutions such as AFC, Japan Finance Corporation for Small Business, and People's Finance Corporation. However, it includes institutional finances that include not only treasury funds of the national government but also local public entities. The role of the institutional finances by treasury funds is to supply funding in pursuance of national policy and to supplement private finance institutions, in cases where private financial institutions can not lend funds because of the low rating of the borrower's credibility or shortage of security or collateral; the borrower's repayment term being too long; or other unfavorable reasons. The government exclusively capitalized AFC. The purpose of the establishment of AFC was to fund agriculture, forestry and fisheries businesses on long term basis at low interest rates needed for maintaining and promoting the productive capacity of agriculture, forestry and fisheries, in case the Norinchukin Bank and other financial institutions can not lend funds. AFC loans are extended to fisheries directly from AFC branch offices or through agent banking institutions such as PCFFCAs (now known as Marine Bank). Figure 3 shows the fund flow from public entities to small and medium-scale fisheries. The AFC provides the loans directly to FCA and to medium-scale of fisheries operations. Small-scale fishermen borrow from the FCA. Under the *Seidoshikin* system FCAs manage the long term loans for coastal fisheries modernization loan. Meanwhile PCFFCA provides long term loans for coastal improvement to FCA members.

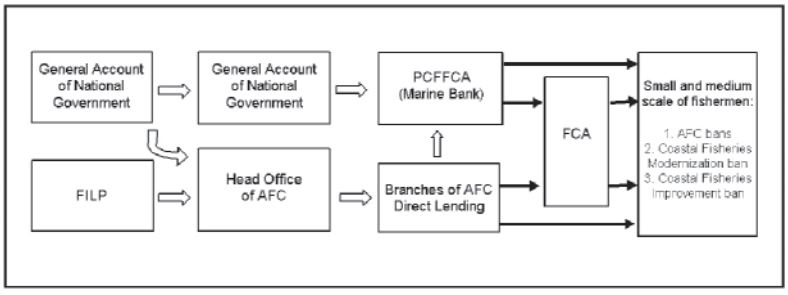

Fig. 3. Coastal rural financial by Treasury Fund System

The government institutional loan interest rate depends upon the original interest rate of the treasury investment and loan. For this reasons, they can provide borrowers with long term and low interest rate funds. Loan conditions differ depending on the loan purpose. Interest rate ranges from 3.0-3.45%, with a term of 5-25 years. The amount of loan extended reached 1124.4 billion JPY, a 25 years peak, in 1989. Since then, the amount has decreased and remained at a much lower level, reflecting

decreased demand due to management environment deterioration and other reasons. The amount was 21.7 billion JPY in 1995 and 16.2 billion JPY in 1989. Regarding loan use, there has been a sharp decrease in loans for fishing boats, and in the annual amount of outstanding loans. At the end of 1995 fiscal year, the amount was 344.9 billion JPY, and in 1998 it was 270.1 billion JPY.

*Chokutaishikin (*Direct loan*)*

The literal meaning of *Chokutaishikin* is, "a direct loan." *Chokutaishikin* is a financing institution with funds originating from fishery cooperative groups, such as FCAs, PCFFCAs and Norinchukin Bank. These funds come from those institutions' deposits. After some early stages of the credit system by fishermen themselves, the government amended the *Chu-sho Gyogyo Yushi Hosho Hou* (the Small and Medium Scale Fisheries Credit Guarantee Law of 1952) in 1974 to strengthen the Fisheries Credit Guarantee Fund Association (FCGFA's) capability of credit guarantee.

Fishery cooperative group institutions supply the loans to fisheries enterprises. To supplement these institutions' credibility, there is the Small and Medium Scale Fishery Credit Guarantee and Insurance System. The system plays an important role in the smooth development of this type of institutional finance. The government introduced a series of subsidized Emergency Loans for fishermen, whose operations were greatly affected by such drastic changes in fishing

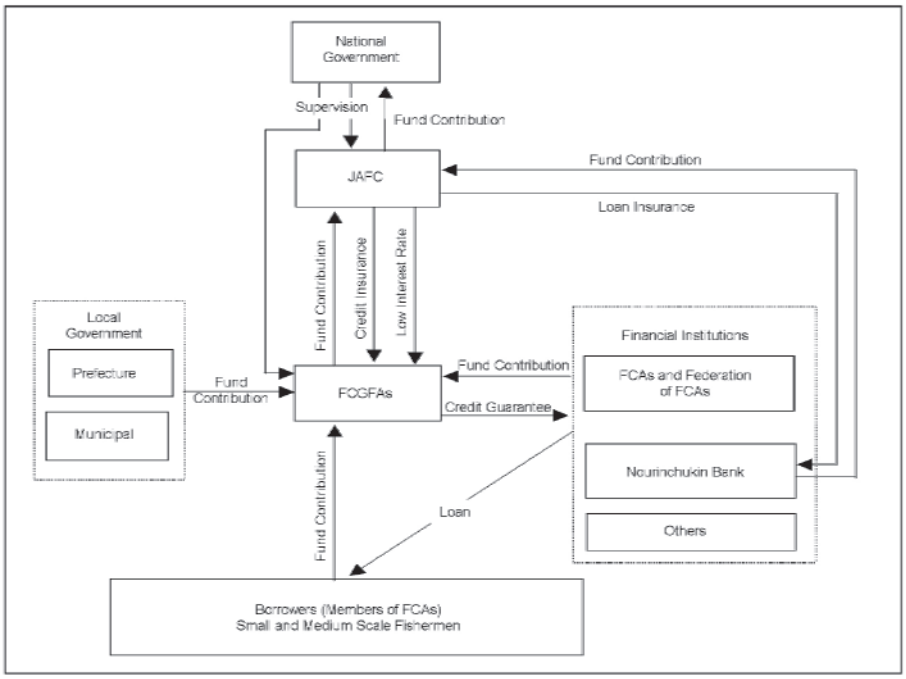

Fig. 4. Credit guarantee and insurance system for loans under fund system originating from cooperative group

Source: Hanafusa, 1996

conditions (such as oil price socks and EEZ regime), to maintain fishing operation and to improve the financial situation of fishermen. These loans included the Special Measure Loan and The Fishery Management Maintenance and Stabilization Loan. A majority of Emergency Loans were accommodated by the credit guarantee system. The Emergency Loans helped rehabilitate the poor financial situation of fishermen by accommodating low interest rate loans. Nevertheless, because of the continued severe fishery circumstances, the financial situation of many fishermen further deteriorated, even after borrowing the Emergency Loans. The accommodation of Emergency Loans resulted in the huge insurance claims in the late 1970s and early 1980s. The balance of the credit insurance account turned to a substantial deficit. The deficit had to be redressed by contributions from Government every year. Since 1982, various measures have been taken to remedy the balance of credit insurance account including a rise in the insurance premium. During the mid-1980s, the Government launched the policy of restructuring government affiliated organizations for agriculture, forestry and fisheries, and the Japan Agriculture, Forestry and Fisheries Credit Fund (JAFIC) was established in 1987. Figure 4 shows the flow of fund contribution for operation of the credit guarantee and insurance system under the fund system originating from cooperative group.

There are four main types of loans *Chokutaishikin* as follows:

1) *Keieikaizenshikin* (coastal fisheries management support loan, or emergency loan). The credit aims to support income in the case of disaster in fisheries businesses. Under the government subsidy, borrowers need to pay only 2.2% interest charge. The total outstanding loan of *keieikaizenshikin* was 21 billion JPY in 1999 and 15 billion JPY in 2001.

2) *Murishi-kaizenshikin* (fisheries improvement loan). This credit scheme aims to improve fishing technology such as vessel constructions, nets, radio communications, drive engines, GPS, radar, and fish sounding devices. The credit can also be used for renovation of housing. Under the government subsidy scheme, borrowers need not pay interest charges. All coastal or small-scale fishermen can access this limited credit by a rotation opportunity system. The total outstanding loan of *Murishi-kaizenshikin* was 208 billion JPY in 1999 and 122 billion JPY in 2001.

3) *Enkoushikin* (Coastal fisheries structure improvement loan). The credit aims to promote fisheries activities of youngsters and non-fishermen by providing this credit for vessel constructions, nets, radio communications, drive engines, GPS, radar and fish sounding devices. Under the government subsidy, the annual interest rate is 2.2%. The total outstanding loans of Enkoushikin was 1,941 billion JPY in 1999 and 1,608 billion JPY in 2001.

4) *Kindaikashikin* (fisheries modernization/innovation loan). This credit aims to improve fishing technology with regard to vessel, nets, radio communications, drive engines, GPS, radar, and fish sounding devices. All small and medium scale fishermen can access this credit with 2.8% annual interest rate. The total outstanding loan of *Kindaikashikin* is 209 billion JPY in 1999 and 182 billion JPY in 2001.

Discussion and Policy Implications

FCA roles on coastal fisheries financial scheme

FCAs play role in fishermen's cash flow management.

Under the FCA framework, the cash flow of fishermen's fishing activities is managed by the FCA. Fishermen only carry out fish capture for marine capture fishermen or culture for aquaculture fishermen. The FCA provides input for production needed, markets the captured fish, and manages the cash of the outcome. Fishermen hold a card similar to a credit card, and the FCA manages all the fishermen's accounts.

FCAs hold a banking function.

FCA carries out the banking function for its fishing communities, mainly in support of fishermen's activities. Furthermore under the FCA law regarding its banking roles an FCA accumulates or raises public funds in the jurisdiction of its fishing community, and provides loans to fishermen. Therefore, in its economic function, the FCA plays a role in banking with regard to fishermen's financial management of fishing activities.

FCA also acts as a frontline institution in assessing the viability of fishermen in credit scheme. The head of the FCA is authorized to make a decision and recommendation on a borrower's credit application. The head of FCA can award credit of up to two million JPY, but must submit a reference to PFFCA (Marine Bank) for credit proposals of more than two million JPY. Table 1 shows the savings and loans of fishermen by the FCA in Japan. The data indicated that the loan ratio to savings is only about 30% during the 1990s and 2000s. The fishermen had a strong income structure indicating their strong propensity to save. Table 2 shows the Amount of Loans Approved on Interest Subsidized Fishery Modernization Category. During the same period, it accounts for only about 30-50% of the maximum budget provided by the government. This figure indicates the very high commitment of the government to promote small and medium scale fisheries.

Table 1. Outstanding of saving and loans by depositor of FCA

Year	Saving (A)	Loans (B)	(Million Yen) Ratio of Loan to Saving (B)/(A) * 100
1993	1,821,695	524,140	28.8
1994	1,744,781	482,387	27.6
1995	1,624,975	490,336	30.2
1996	1,569,064	483,209	30.8
1997	1,497,125	466,974	31.2
1998	1,455,430	456,668	31.4
1999	1,346,663	460,420	34.2
2000	1,303,774	449,954	34.5
2001	1,299,011	429,312	33.0

Source: Norinchukin Bank 1999, 2000

Table 2. Amount of loans approved on interest subsidy fishery modernization loans

Year	Loan Approved (A)	Maximum Budget for Loans (B)	(Million Yen) Ratio Budget Usage (A)/(B) * 100
1993	67,849	125,000	54.3
1994	64,605	125,000	51.7
1995	61,502	125,000	49.2
1996	56,948	125,000	45.6
1997	52,925	125,000	42.3
1998	52,706	125,000	42.2
1999	51,313	125,000	41.1
2000	43,536	125,000	34.8
2001	40,705	125,000	32.6

Source: Norinchukin Bank 1999, 2000

Fisheries improvement vs resources enhancement.

It is weakly accepted that Japanese government financial scheme for promoting coastal fisheries is very strong and too good (Matsuda 2003). The scheme has caused the adoption of unnecessarily sophisticated fishing technologies in the coastal fisheries sector. Fishing vessels of more than 20 years of productive age had been replaced by new models and technologies in less than 10 years, although this has been leveled off in the last decade. This has led to overcapitalization, resulting in high cost fisheries as well as a deterioration in natural resources. The government is expected to re-evaluate the schemes not only considering the fishermen's welfare but also resources enhancement.

International perspective on Government Financial Transfer (GFT)

Does GFT always create resources depletion?

Numerous discussions have concluded subsidies or GFTs in fisheries have created poor fisheries resources conditions. Steenblik and Munro (1998) from OECD showed that many fish stocks are overexploited and corrective measures are needed to restore their productivity. They argued that the lack of well-defined property right, subsidies, and technical advances in fishing equipment have all contributed to the problem. The main issues on the discussion of international institutions are the influence of subsidies or GFT to the resources conservation and international trade (Myers 1996, Milazzo 1998).

Myers (1996) proposed that not all GFT is bad. He suggested that a bad or good subsidy depended upon a detailed examination of the type, scope, and impact of the subsidy. Milazzo (1998) suggested that bad subsidy was a subsidy

that directly or indirectly enhances exploiting operation and capacity. However, in recent years, many governments have paid increasing attention and resources to programs intended to have the opposite effect. These programs are designed to enhance the resource base, reducing fishing operations and capacity, and foster cleaner exploitation technology, and may therefore be termed as good subsidies, at least from a conservation perspective. Steenblik and Munro (1998), and Porter (2002) classified subsidies given by several international institutions (see Tables 3 and 4). The international institutions have discussed how to deal with fishery subsidies, and considered that other negative factors, such as ineffective fishery management and the fishing operations of FOC fleets, have been seriously disturbing the sustainable utilization of fishery resources.

Table 3. Fisheries subsidies restriction articulated by international institutions

International Institution	Expression regarding Fisheries Subsidy Restriction
OECD (October 1997)	Revenue-enhancing transfer in the form of market price support (i.e., financed by consumers • transfer generated by tariffs
	Revenue-enhancing transfer in the form of direct payments (from government budgets) • Payment based on the level of production or sales • Per-vessel payment • Income-based direct payment
	Cost-reducing transfer • Transfer related to productive capital • Transfer related to intermediate input • Other cost-reducing transfer
	General services (net cost incurred by government) • For fisheries management • For research • For other general services
FAO (International Instrument for the Management of Fishing Capacity, October 1998)	Reduce and progressively eliminate subsidies which contribute directly to the build-up of excess fishing capacity; and
	Avoid using economic incentive to facilitate the transfer of capacity to the areas under national jurisdiction of other states or to the high seas if such transfers are likely to undermine the sustainability of resources in these waters
APEC (Early Voluntary Sectoral Liberalization/ ESVL initiative, November 1997)	Progressively removing all subsidies (in advance of WTO commitments for WTO members; by 2003 or the date specified in the eventual WTO accession commitments for non-members
WTO (Committee of Trade and Environment/ CTE must examine the second part of Item 6 in 1996)	The environmental benefits of removing trade restriction and distortion
The World Bank (World Bank publication on *Subsidies on World Fisheries* written by Matteo Milazzo, 1998)	The Bank will endeavor to avoid lending money for projects that would increase capacity or effort in marine fisheries

Source: Steenblik and Munro, 1998 (adapted)

Table 4. Major fishery subsidized loan for small and medium scale fisheries in Japan by classification of subsidies restriction of international institutions

Subject of subsidized loan	OECD	FAO	APEC	WTO	World Bank
Fishing boat	Cost reduction	Cost reduction	Remove all	Prohibited	Avoid the loan
Repairing of fishing boat	Cost reduction	Cost reduction	Remove all	Prohibited	Avoid the loan
Drive engine	Cost reduction	Cost reduction	Remove all	Prohibited	Avoid the loan
Fishing devices	Cost reduction	Cost reduction	Remove all	Prohibited	Avoid the loan
Seed and seedling	General services	Unidentified	Remove all	Non-actionable	Non-actionable
Improvement of environment	General services	Unidentified	Remove all	Non-actionable	Non-actionable
Public facilities	General services	Unidentified	Remove all	Non-actionable	Non-actionable

Bad GFT, international trade rules and bad resources management.

The Japanese government has argued that fishery products were a source of valuable animal protein and thus contributed to food security. They realized that the depletion of fish stocks due to over-exploitation (Roberts 1998; Benjamin 2000) and overexploitation of the resources (Hutching 2000) on a global scale is threatening sustainable supplies. For a stable supply of fishery products, and at the same time ensure a balanced utilization of the sustainability of the ecosystem without successively protecting specific species, every nation should fulfill its obligation to manage resources and fisheries in its waters, and ensure a stable supply of fish and fishery products to its nationals. When establishing international trade rules, these points should be fully taken into account. The roles and functions of fisheries and fishing communities, including the maintenance of rural coastal communities, the management of coastal areas, the contribution to environmental preservation and the provision of recreational fishing opportunities to nationals, should also be taken into account.

The Japanese government added that for tariff and non-tariff measures on fishery products, various factors should be fully considered, such as the relationship of tariff and non-tariff measures with conservation measures, the fulfillment of obligations on conservation and management by each country, a stable supply of fishery products, as well as the social, economic and cultural roles played by the fisheries and fishing communities. International trade rules on fisheries should not encourage the fishing operations of FOC fleets that do not bear resource conservation costs and should not lead to overexploitation thereby neglecting resources management.

With regard to fishery subsidies, the most important issue is how to guarantee a sustainable utilization of fishery resources. It is necessary to identify all the factors that hinder sustainable resource utilization and also to develop measures to deal with these negative factors. It is inappropriate to single out fishery subsidies. It should also be noted that there are positive fishery subsidies that contribute to the

sustainability of fishery resources, such as those for a reduction in fishing capacity, the improvement of fishery management and stock rehabilitation and enhancement. The positive aspects of fishery subsidies should be properly recognized and assessed.

In conclusion, lessons from the Japanese experience indicate that institutional credit schemes are effective tools to promote coastal fisheries as part of rural community development. Designed principles of the scheme were good in terms of strengthening the income structure of fishermen, although too good in terms of the result over capitalization of fisheries in near future. The implication for developing countries, is that they can learn lessons from the past and skip unnecessary steps. The design of rural financial system must consider not only the fishermen's welfare, but also the future resources enhancement and management for the next generation.

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